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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,848	10/23/2003	Takeharu Yamamoto	10407-68US (A3039MT-US1)	6693

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EXAMINER	
RIVERO, MINERVA	

ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/691,848	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Minerva Rivero	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Araki *et al.* (US 6,009,056), hereinafter Araki.

4. Regarding claims 1, Araki discloses an optical disc controller for servo-controlling an optical disc device comprising a disc motor and an optical head, the disc motor rotating an optical disc, the optical head emitting a light beam for recording data on the optical disc and/or reproducing data from the optical disc (Col. 2, Lines 28-35),

the optical disc controller, comprising (Col. 3, Lines 11-15):

a variable clock output section for outputting a plurality of clock signal frequencies (Col. 2, Lines 46-49),

and a control section which receives from the optical head a signal indicating a deviation from a predetermined target value to servo-control the light beam of the optical disc device and performs an operation according to the signal indicating the deviation so as to obtain and output a signal indicating a control amount (Col. 2, Lines 59-60; Col. 4, Lines 47-49);

wherein the variable clock output section changes a frequency of the clock signal according to a recording speed and/or a reproducing speed when the optical disk device performs recording and/or reproduction, and the control section performs an operation to be performed in synchronization with the clock signal of the variable clock output section (Col. 4, Lines 47-49; *regular signal reproduction*, Col. 4, Lines 56-64; *variable frequency read operation*, Col. 5, Lines 3-6).

5. Regarding claim 2, Araki discloses the operation is performed by transmitting the signal indicating the deviation through a filter having a predetermined characteristic, and the characteristic of the filter is varied according to the recording speed and/or the reproducing speed (Col. 7, Lines 17-26; *synchronizing the clock signal*, Col. 7, Lines 32-36).

6. Regarding claim 3, Araki discloses the characteristic of the filter is determined by a filter coefficient and a frequency of the clock signal, and the filter coefficient is

constant regardless of the recording speed and/or reproducing speed (Col. 7, Lines 17-26 and 44-46).

7. Regarding claim 4, Araki discloses an optical disc device for emitting a light beam to an optical disc having a track for recording data (Col. 3, Lines 11-15),

the optical disc device comprising:

a converting section which converts, into an electric signal, light reflected from the optical disc or light transmitted though the optical disc (Col. 3, Lines 13-14),

a focus actuator for moving a focus of the light beam perpendicularly to a data surface of the optical disc (Col. 2, Lines 41-44);

a tracking actuator for moving the light beam in a radius direction of the optical disc (Col. 2, Lines 41-44);

a control section which performs an operation according to the electric signal and generates a control signal for controlling the focus actuator so that the light beam keeps a predetermined converging state on the data surface and controlling the tracking actuator so that the light beam is positioned at a center of the track (Col. 3, Lines 17-19; see *deviation* and *error* in Fig. 4);

and a variable clock output section for outputting a plurality of clock signals of different frequencies (Col. 4, Lines 65-67), wherein the variable clock output section changes a frequency of the clock signal according to a recording speed and/or a reproduction speed when the converting section performs recording and/or reproduction, and the control section performs an operation to be performed in

synchronization with the clock signal of the variable clock output section (Col. 4, Lines 47-49; *regular signal reproduction*, Col. 4, Lines 56-64; *variable frequency read operation*, Col. 5, Lines 3-6).

8. Regarding claim 5, Araki discloses an input/output section which receives the electric signal converts the signal into a digital signal, outputs the signal to the control section, receives a control signal from the control section, converts the signal into an analog signal, and outputs the signal to the focus actuator and the tracking actuator (Col. 3, Lines 11-19; Col. 2, Lines 41-43; *focusing and tracking control systems*, Col. 7, Lines 46-47; see A/D and D/A converters in Fig. 4), wherein the input/output section has a constant operating clock regardless of the recording speed and/or the reproducing speed (Col. 6, Lines 61-65).

9. Regarding claim 6, Araki discloses the control section generates the control signal by transmitting the electric signal through a filter having a predetermined characteristic, and the characteristic of the filter is varied according to the recording speed and/or the reproducing speed (Col. 7, Lines 17-26; *synchronizing the clock signal*, Col. 7, Lines 32-36).

10. Regarding claim 7, Araki discloses the characteristic of the filter is determined by a filter coefficient and a frequency of the clock signal, and the filter coefficient is

constant regardless of the recording speed and/or reproducing speed (Col. 7, Lines 17-26 and 44-46).

11. Regarding claims 8, 11-12, 14 and 17-18, Araki discloses an optical disc controller for servo-controlling an optical head, a disc motor, and a light beam in an optical disc device comprising the disc motor rotating an optical disc, the optical head, the disc motor rotating an optical disc, the optical head emitting a light beam for recording data on the optical disc and/or reproducing data from the optical disc (Col. 3, Lines 11-15),

the optical disc controller comprising:

an interrupt signal generating section for generating an interrupt signal in each predetermined time period (*sampling clock signal for the digital filter*, Col. 7, Lines 12-13), and

a control section which receives an electric signal indicating a current state or a deviation from a target value from the optical head and the disc motor of the optical disc device and performs an operation according to the electric signal so as to obtain and output a control signal indicating a control amount (Col. 2, Lines 52-61; Col. 7, Lines 9-13, see *deviation* in Fig. 4), wherein the control section performs the operation every time the interrupt signal is received from the interrupt signal generating section, and the control section stops operating and goes into a sleep mode at least for a predetermined time period between reception of the interrupt signal and reception of a subsequent

interrupt signal (*sampling clock signal for the digital filter*, Col. 7, Lines 12-13; see Fig. 4).

12. Regarding claims 9 and 15, Araki discloses the control section performs the operation every time the interrupt signal is received, and the control section stops operating and goes into the sleep mode from when the operation is completed to when the subsequent interrupt signal is received (*sampling clock signal for the digital filter*, Col. 7, Lines 12-13).

13. Regarding claims 10 and 16, Araki discloses the operation includes a disc motor control operation for controlling the disc motor, an operation for focus control of the light beam, an operation for tracking control of the light beam, and an operation for traverse control of the optical head, and the control section, in each of the operations, stops operating and goes into the sleep mode during at least one of the operations (*spindle motor*, Col. 5, Lines 29-32; *focusing and tracking control systems*, Col. 7, Lines 9-11; *sampling clock signal for the digital filter*, Col. 7, Lines 12-13).

14. Regarding claims 13 and 19, Araki discloses at least a part of the input/output section operates even when the control section is placed into the sleep mode ().

15. Regarding claims 20 and 22, Araki discloses an optical disc controller for servo-controlling an optical disc device comprising a disc motor and an optical head, the disc motor rotating an optical disc, the optical head emitting a light beam for recording data

on the optical disc and/or reproducing data from the optical disc (), the optical disc controller comprising:

a control section which receives an electric signal indicating a current state or a deviation from a target value from the optical head and the disc motor of the optical disc device and performs an operation according to the electric signal so as to obtain and output a control signal indicating a control amount (Col. 2, Lines 52-61; Col. 7, Lines 9-13, see *deviation* output in Fig. 4; see A/D and D/A converters in Fig. 4), and

an input/output section having a monitor terminal, the input/output section receiving the electric signal to convert the signal into an analog signal from the control section or receiving a control signal from the control section to convert the signal into an analog signal, and outputting the converted signal from the monitor to an outside (see A/D and D/A converters in Fig. 4; see feedback input *error* in Fig. 4).

16. Regarding claims 21 and 23, Araki discloses the electric signal is a focus error signal or a tracking error signal (*focusing and tracking control systems*, Col. 7, Lines 9-11).

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okada *et al.* (US 7,085,200) disclose a stepping motor controlling method for a disk driving apparatus.

Nabeshima *et al.* (US 4,623,994) disclose a scanning servos system for an optical-disc reproduction apparatus.

Nagano et al. (US 4,907,214) disclose an eccentricity correction apparatus for an optical disk device.

Maeda (US 5,337,295) discloses a digital audio signal reproducing apparatus including a pause-key procedure for pausing an actuator.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (571) 272-7626. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MR 9/21/06

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER